

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A signal processing system for a construction machine comprising a prime mover, a variable displacement hydraulic pump driven by said prime mover, a fuel injection device for controlling fuel injection in said prime mover, input means for commanding a target revolution speed of said prime mover, revolution speed detecting means for detecting an actual revolution speed of said prime mover, fuel injection control means for controlling a fuel injection state of said fuel injection device in accordance with the target revolution speed commanded from said input means and the actual revolution speed detected by said revolution speed detecting means, and pump torque control means for controlling a maximum absorption torque of said hydraulic pump in accordance with the target revolution speed commanded from said input means and the actual revolution speed detected by said revolution speed detecting means, wherein said signal processing system further comprises:

a plurality of environment detecting means for detecting status variables related to environments of said prime mover or said hydraulic pump and outputting respective corresponding detected environment signals;

environment modifying means for receiving the detected environment signals and modifying, in accordance with the detected environment signals, at least one of the fuel

injection state of said fuel injection device controlled by said fuel injection control means and the maximum absorption torque of said hydraulic pump controlled by said pump torque control means;

communication control means for obtaining, from an external terminal via communication, alteration data for altering one or more computation elements contained in at least one of said fuel injection control means, said pump torque control means and said environment modifying means; ~~and~~

computation element altering means for altering the computation elements based on the alteration data obtained by said communication control means; and

information collecting means for collecting various items of information including the detected environment signals from said environment detecting means, wherein said communication control means outputs the various items of information obtained by said information collecting means to said external terminal via communication, and said communication control means performs communication with respect to said external terminal in a wireless manner.

2. (Previously Presented) A signal processing system for a construction machine according to Claim 1, wherein:

said environment modifying means is pump torque modifying means for modifying the maximum absorption torque of said hydraulic pump, which is controlled by said pump torque control means, in accordance with the detected environment signals by using a predetermined computation element for torque modification; and

said communication control means is means for obtaining, from said external terminal, alteration data for altering the computation element for torque modification, and said computation element altering means is means for altering the computation element for torque modification based on the obtained alteration data.

3. (Previously Presented) A signal processing system for a construction machine according to Claim 1, wherein:

said environment modifying means is fuel injection modifying means for modifying the fuel injection state of said fuel injection device, which is controlled by said fuel injection control means, in accordance with the detected environment signals by using a predetermined computation element for injection modification; and

said communication control means is means for obtaining, from said external terminal, alteration data for altering the computation element for injection modification, and said computation element altering means is means for altering the computation element for injection modification based on the obtained alteration data.

4. (Previously Presented) A signal processing system for a construction machine according to Claim 1, wherein:

said environment modifying means includes pump torque modifying means for modifying the maximum absorption torque of said hydraulic pump, which is controlled by said pump torque control means, in accordance with the detected environment signals by using a predetermined computation element for torque modification, and fuel injection

modifying means for modifying the fuel injection state of said fuel injection device, which is controlled by said fuel injection control means, in accordance with the detected environment signals by using a predetermined computation element for injection modification; and

said communication control means is means for obtaining, from said external terminal, alteration data for altering the computation element for torque modification and the computation element for injection modification, and said computation element altering means are means for altering the computation element for torque modification and the computation element for injection modification based on the obtained alteration data.

5. (Previously Presented) A signal processing system for a construction machine according to Claim 1, wherein:

said pump torque control means is means for controlling the maximum absorption torque of said hydraulic pump based on the target revolution speed and the actual revolution speed by using a predetermined computation element for torque control; and

said communication control means is means for obtaining, from said external terminal, alteration data for altering the computation element for torque control, and said computation element altering means is means for altering the computation element for torque control based on the obtained alteration data.

6. (Previously Presented) A signal processing system for a construction machine according to Claim 1, wherein:

said fuel injection control means is means for controlling the fuel injection state of said fuel injection device based on the target revolution speed and the actual revolution speed by using a predetermined computation element for injection control; and

said communication control means is means for obtaining, from said external terminal, alteration data for altering the computation element for injection control, and said computation element altering means is means for altering the computation element for injection control based on the obtained alteration data.

7. (Previously Presented) A signal processing system for a construction machine according to Claim 1, wherein:

said pump torque control means is means for controlling the maximum absorption torque of said hydraulic pump based on the target revolution speed and the actual revolution speed by using a predetermined computation element for torque control;

said fuel injection control means is means for controlling the fuel injection state of said fuel injection device based on the target revolution speed and the actual revolution speed by using a predetermined computation element for injection control; and

said communication control means is means for obtaining, from said external terminal, alteration data for altering the computation element for torque control and the computation element for injection control, and said computation element altering means

are means for altering the computation element for torque control and the computation element for injection control based on the obtained alteration data.

8. (Canceled)

9. (Currently Amended) A signal processing system for a construction machine according to Claim ~~8~~ 1, wherein:

said signal processing system further comprises operation detecting means for detecting status variables related to the operating state of said prime mover or said hydraulic pump and outputting corresponding detected signals; and

said information collecting means is means for collecting various items of information including the detected environment signals from said environment detecting means and detected operation signals from said operation detecting means.

Claims 10-11 (Canceled)

12. (Previously Presented) A signal processing system for a construction machine according to Claim 1, wherein said environment detecting means are means for detecting at least one of environment factors including an intake pressure, an intake temperature, an exhaust temperature, an exhaust pressure, a cooling water temperature, a lubricant pressure and a lubricant temperature of said prime mover, an atmospheric pressure, a fuel temperature, and a hydraulic fluid temperature.